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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,531	12/13/2005	Oyvind Harboc		3114

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WASHINGTON, DC 20005

EXAMINER

SEVER, ANDREW T

ART UNIT	PAPER NUMBER
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2851

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/30/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/30/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary

Application No.

10/560,531

Applicant(s)

HARBOE, OYVIND

Examiner

Andrew T. Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 recites the limitation "the inverse transfer function" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

While claim 1 recites a transfer function, which is defined in applicant's specification, there is no antecedent basis for an "inverse transfer function". The term "inverse" does not have a clearly defined meaning, which would render there being an antecedent basis if one knows the transfer function; the "inverse" function could be related to the "transfer

function” or it could be completely unrelated. Accordingly claim 4 is rejected under 35 U.S.C. § 112.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ioka (US 2002/0024640.)

With regards to applicant's claim 1:

Ioka teaches in paragraphs 12, 41, 58, 71, and 72 a method for accurately and efficiently calculating the input signals to at least two light projectors (see figure 3 which shows the setup of the system performing the method which includes at least two projectors (3a and 3b) for creating an invisible transition zone between them,

Wherein the dimensions of the transition zone is known (see paragraph 58 which states that color difference compensation is done for the overlap region, as explained in paragraphs 12 and 41 the compensation is for a known transition zone (overlap region OL) given that other calibrations (such as the geometric deformation compensation paragraph 49-52 determine the location of each projected image, the overlap is known prior to correcting for color and brightness), and the emitted light towards the transition

zone from each projector is based on a predetermine transfer function (see paragraph 72 wherein the transfer function is equivalent to Ioka's gamma characteristics) from input signal to the projected image in the transition zone (as stated in paragraph 12 output characteristic compensation data for each projector is known, which includes a transfer function for each projector as taught in paragraphs 72 (the relationship between each projector relative to the input signal), and

Wherein the input to the light projectors are provided from a tabulated function of using, red, green, blue, and blending factor (see paragraph 41), said tabulated functions for each projector at each point providing a sum constituting the transfer function in the point so as to obtain predictable image characteristics in the transition zone (see paragraph 45-47 which states the measurements of the various types of compensation described in paragraph 41-72 are used combined with the transfer function as taught in paragraph 72) to obtain predictable image characteristics in the transition zone.

With regards to applicant's claim 2:

As taught in paragraph 41 the input to the projectors is derived from the combination of the output characteristic compensation data with the tabulated function and is divided to the individual projectors to produce a tiled display.

With regards to applicant's claim 3:

As stated in paragraph 41 the transfer function and other compensation data is used to calculate input to the projectors and is correspondingly determined prior to edge blending

(see paragraph 39 which states that the compensation data is obtained prior to actually projecting images.)

With regards to applicant's claim 4 as nearly as can be understood:

See figure 17 which states in step 6 and inverse function is used.

With regards to applicant's claim 5:

See paragraph 72 which states that transfer function (gamma characteristics see the 6-8 lines of paragraph 72), is obtained by measuring the relationship between the input image data and the characteristics of the emitted light (this is the definition of the Gamma correction and therefore the transfer function).

With regards to applicant's claim 6:

See paragraph 72 which states that the transfer function is applied to input data to the projector (also see paragraph 41).

With regards to applicant's claim 7:

See paragraph 72, which teaches in the last two sentences that the transfer function for each projector is used to interpolating between the projectors so as to provide a smooth transition between the project images (the output becomes linear).

With regards to applicant's claim 8:

Paragraph 72 states that the transfer function (gamma characteristic) is determined by emitting light and measuring the relationship between applied signal and measure light characteristics (see the middle of the paragraph around the 8th line.)

With regards to applicant's claim 9:

As stated in paragraph 71 the applied signal is a ramp from zero output intensity to full output intensity (it goes from 0 to 255 (32 levels at a time).)

With regards to applicant's claim 10:

As described in paragraph 107 the above methods are performed automatically after the projectors and cameras are positioned and therefore would be part of a start up procedure.

With regards to applicant's claim 11:

A controller 2 is taught in figure 3 for controlling at least two image projectors (3a and 3b), which perform the above methods.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,717,625 to Thielemans, which as stated in the abstract, teaches method for adjusting two projectors automatically during the normal use of the projector.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AS



Andrew Sever